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ABSTRACT

The document is one of the teaching units developed by the Utah World of Work Project, designed to integrate career awareness into the regular curriculum at the elementary level. The fifth grade guide is tied to the science area and focuses on conservation as practiced by Forest Service workers; the growth cycle of forests and the management of forest lands with respect to forage, recreational activities, wood, water, and wildlife; and career opportunities at both professional and nonprofessional levels. Twelve lessons including learning activities and resource materials are provided, organized by concept and objective, and suggestions included for additional resources. (SA)

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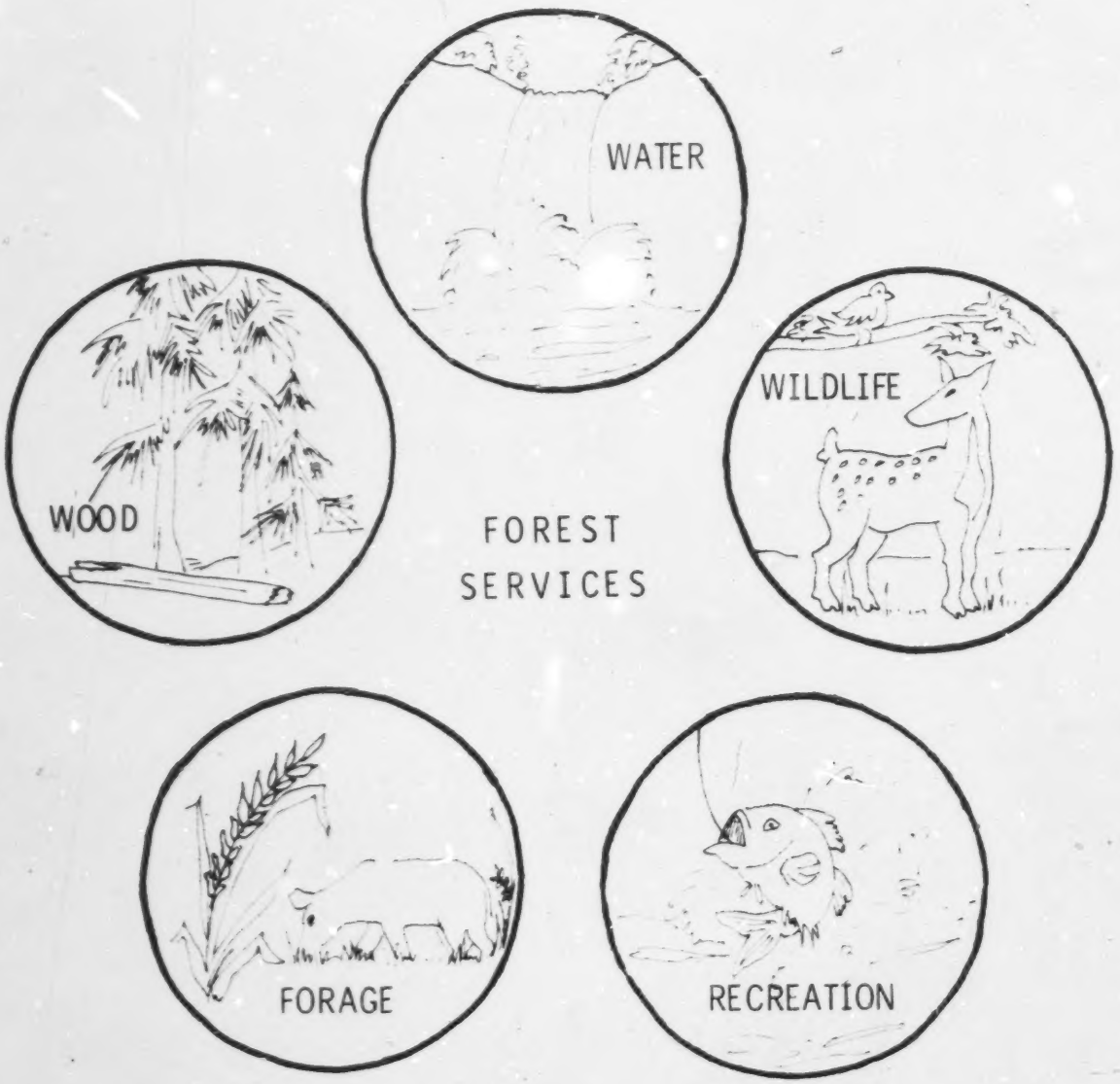

FOREST
SERVICES

SCIENCE
FIFTH GRADE
WORLD OF WORK PROJECT

CE003297

WORLD of WORK

Occupational Education Program for Children

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Sponsored by

Utah State Department of Public Instruction

Vocational Education Division

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Salt Lake City, Utah

WORLD OF WORK

FOREST SERVICES

OBJECTIVES:

TO DEVELOP AN AWARENESS THAT WORK ESTABLISHES SOCIAL AND ECONOMIC VALUES.

To learn that men need to be aware of the availability of natural resources and work to conserve them.

TO DEVELOP AN AWARENESS THAT THERE ARE A WIDE VARIETY OF CAREERS IN OUR SOCIETY.

To be aware that the worker functions with one or more of the following: people, animals, plants, data, products, services, or ideas.

To learn that jobs may continue, change, disappear, or be created.

TO DEVELOP AN AWARENESS THAT WORKERS PERFORM THEIR LABORS FOR MANY REASONS.

To provide the worker and his family with the things they need as they progress through life.

Outline of Concepts

.01 A very important part of responsible citizenship is taking care of personal property, family property, and community property, and it extends to special areas such as taking care of our national forests.

.02 There are nine national forests or parts of national forests in Utah.

.03 The main responsibility of Forest Service workers is to manage the resources which our national forests contain.

.04 The U.S. Forest Service workers have a basic interest in the multiple use management of all renewable surface resources of our national forests.

.05 Multiple use management of forest lands is important for continuous yields of forage.

.06 Multiple use management of forest lands is important for continuous recreational activities.

.07 Multiple use management of forest lands is important for continuous yields of wood (timber).

.08 Multiple use management of forest lands is important for a continuous supply of water.

.09 Multiple use management of forest lands is important for continuous yields of wildlife.

.10 There are several stages in the development of a climax forest.

.11 Professional foresters plan and supervise the management of national forests.

.12 Nonprofessional foresters (technicians, aids, clerks, skilled workers, and laborers) provide important services for the U.S. Forest Service and American citizens.

01 Lex. 00 W.S.

Conservation & Agri Bus. Cluster — Forest Services Area of Study

CONCEPT: A very important part of responsible citizenship is taking care of personal property, family property, and community property, and it extends to special areas such as taking care of our national forests.

OBJECTIVE: List, illustrate or do at least one thing to show respect and concern for each of the following: (1) personal property, (2) family property, (3) community property, and (4) national forest resources.

WHAT I NEED	WHAT I DO
	1. DISCUSS with students what each of the following is: a. Private property (personal or that of someone else) b. Family property c. City or community property d. Federal property e. National forest resources. 2. DEVELOP these concepts: a. We ought to have concern for the property of others and the public, just as we have concern for our own property. b. Often there is a close relationship shown between the care one has for personal property and the care one has for the property of others or the public. c. A genuine concern for property involves positive actions on the part of one who feels this concern. That is, if you really have a concern for property, you'll take care of it and use it properly.

WHAT I NEED	WHAT I DO
	d. Public as well as private property is important to us now, as well as it is in the future. 3. DISCUSS or ILLUSTRATE ways of taking care of property. Suggestions: a. Personal property (1) Keeping my room and belongings clean and in order. b. Family property (1) Doing my share of the cleaning and work in our home and yard. (2) Using furniture and appliances properly. c. City or community property (1) Using the city library and its facilities properly. (2) Avoid defacing public property and help keep the sidewalks free of litter. d. Federal property (1) Use post offices properly. (2) Avoid throwing trash on federal highways. e. National forest resources (1) To be developed more fully later in the unit.

WHAT I NEED	WHAT I DO
	4. DISCUSS with students ways that forest resources are enjoyable or useful to them and others. Here are some suggestions you may want to add to their list. a. Lumber and lumber products b. Scenic beauty c. Picnicking d. Hiking e. Fishing
	5. ASK: What forest resources have you seen harmed or destroyed? Where? How? When? Has this destruction occurred because of man's carelessness? Here are some suggestions: a. Fire b. diseased trees c. Polluted streams d. Cluttered picnic areas e. Eroded topsoil f. Overgrazed grass areas g. Imbalance of wildlife.
Newspapers Television newscasts Radio newscasts Magazines	6. HAVE students follow or study newspapers, television news shows, magazine articles, and personal observation to learn about the destruction of public property and especially forest resources. Have them share their information with other students

WHAT I NEED	WHAT I DO
	7. ASK this question: Who do newscasters and editorial writers feel should assume the responsibility for the protection and conservation or our natural resources? Suggestion may include: a. The federal government b. The state government c. The county government d. The city government e. The individual citizen 8. ASK this question: Do we as individuals have a tendency to also give governments the responsibility for caring for our resources? Note: Looking at the actions of some picnickers, hunters, fishermen, campers, and pleasure seekers, and the careless manner in which they often handle forest resources indicates that they feel others, not themselves, are responsible for its preservation. 9. ASK this question: How should individuals feel and act in regards to the forest resources? Help students to develop the idea that they have a real responsibility in the wise use of natural resources. Their future well-being depends to a great extent on the wise use of natural resources. 10. To strengthen the concept that I have a responsibility to respect and care for personal, family, community, and federal resources such as national forests, do at least two of the following suggested activities or others that are appropriate to your community.

WHAT I NEED	WHAT I DO
	a. Clean up area after a picnic and put trash in garbage cans. b. Use fires carefully at specified times and in designated areas. c. Respect hunting laws. d. Talk to members of the Forest Service about participating in a project of planting trees along the foothills near your school. e. Participate in a community clean-up campaign. 11. TELL students that although one organization, the U.S. Forest Service in the Department of Agriculture, has the specific responsibility for the wise management of our forest resources, all Americans must share this responsibility. Then discuss a few facts about the U.S. Forest Service. a. It was first called the Bureau of Forestry. An Act of Congress in 1905, named it the U.S. Forest Service. b. The U.S. Forest Service has the charge of providing wise management of forest resources for the greatest good for the greatest number of people now, as well as in the future. Man must continually be reminded that he has unlimited wants, but only limited resources. c. The U.S. Forest Service employs thousands of men and women to manage these resources wisely. d. There are more than 200,000 acres of land in our national forests.

WHAT I NEED	WHAT I DO
	e. The U.S. Forest Service has five areas of basic concern. They are: water, wildlife, forage, timber or lumber, and recreational resources.

02 Lex. 01 W.S.

Conservation & Agri. Bus. Cluster — Forest Services Area of Study

CONCEPT: There are nine national forests or parts of national forests in Utah.

OBJECTIVE: (1) Name and locate the nine U.S. National Forests in Utah, (2) find out the size of each, and (3) tell or illustrate one interesting thing about each forest.

WHAT I NEED	WHAT I DO
Map: National Forests of the Intermountain Region, U.S. Forest Service.	1. HAVE a large map of Utah on a bulletin board for students to study. a. Have students find the name and location of each national forest. b. Determine which forests are in Utah or parts of other states. c. Have students make comparisons of their size.
WOW Worksheet: National Forests in Utah and Surrounding States, 02 01.	2. MAKE a transparency of this worksheet and have students discuss the information along with their study of the map.
	3. HAVE students send for information on each forest by writing to a particular forest supervisor office. See information on the back side of the map listed above.
	4. As students obtain information from the different forests, HAVE them share their information with other students.
	5. CHECK with students to see if any of them or their parents have information or pictures to share about any of the national forests. If they do, and are willing to do so, prepare and have such a visit by one of those persons.

WOW Worksheet: 02 Lex. 01 W.S.

National Forests in Utah and Surrounding States

Forests	Gross Acres	Net Acres
Ashley	1,297,934	1,285,040
Cache	954,100	414,157
Caribou	9,095	7,110
Dixie	1,966,030	1,884,307
Fish Lake	1,528,310	1,426,514
Manti-LaSalle	1,310,613	1,237,354
Sawtooth	92,403	71,161
Uintah	865,163	797,579
Wasatch	1,023,860	846,729
	9,047,505	7,969,951

Note: The gross acreage includes private lands within the exterior boundaries of the national forest

The net acreage includes national forest lands only.

Some of these national forests are partly in other states.

03 Lex. 02 W.S.

Conservation & Agri. Bus. Cluster — Forest Services Area of Study

CONCEPT: The main responsibility of Forest Service workers is to manage the resources which our national forests contain.

OBJECTIVE: (1) Name or show five resources, (2) name or illustrate benefits of each, and (3) explain or illustrate at least three responsibilities of forest service workers.

WHAT I NEED	WHAT I DO
Bulletin: In Your Service, The Work of Uncle Sam's Forest Rangers, U.S. Dept. of Agri., Federal Bldg., 125 South State, Salt Lake City, Utah. **WOW Worksheet:** Five Important Resources, 03 01. Look in encyclopedias under headings: Conservation Resources Wood (Forests) Forage (Grasslands) Water Wildlife Recreation	1. HAVE students locate and share information about these five resources: a. Wood (lumber and forests) b. Forage (grasslands) c. Water d. Wildlife e. Recreation 2. MAKE transparency of the WOW Worksheet, Five Important Resources, and HAVE students discuss and share the information they have located. 3. HAVE students keep a notebook. Give them the challenge to find out more about these resources and why they are of vital importance to us.

WHAT I NEED	WHAT I DO
Films: Our Magic Land and Wildlife and the Human Touch, Forest Service Films, Utah State Library Commission Film Library 2150 So. Second West #16 Salt Lake City, Utah 84115	4. SHOW and DISCUSS the information from one or both of these films. a. What resources were shown? b. How are they important to us? c. How are they protected or conserved?
Forest Service Federal Building 125 South State St. Salt Lake City, Utah or Contact a Forest Ranger from your area or at a Ranger Station.	5. MAKE plans to have a Forest Ranger visit your classroom to tell about his job and the forests. a. Phone or write a Forest Ranger and set a date for his visit.
WOW Worksheet: Sample List of General Questions, 03 02.	b. Identify some basic questions and information that your students would like him to discuss relevant to his work as a Forest Ranger. c. Suggest that he bring materials, equipment, and other things that will be interesting and worthwhile to students. d. Prepare students for the visit. (1) Good questions and questioning techniques. (2) Good listening habits. (3) Be appreciative.

WHAT I NEED	WHAT I DO
	6. HAVE your resource visitor attend. Follow your plans carefully. Be appreciative of what he says and does. 7. DISCUSS this important question: How can I help Forest Rangers and forest conservation? 8. HAVE students make reports, pictures, charts or other activities that do the following: a. Name or illustrate the five resources. b. Name or illustrate the uses or benefits of these resources. c. Explain or illustrate at least three responsibilities of Forest Service workers.

WATER
WOOD
WILDLIFE
FIVE
IMPORTANT
RESOURCES
FORAGE
RECREATION

Sample List Of General Questions

This is a suggestive list of "all occasion" questions that students may ask of resource people and workers. (The resource person might appreciate receiving, prior to his appointment, a list of some of the questions that might be asked.)

1. What is the title of your job?
2. Where do you work?
3. Why do you work there?
4. What are the duties and responsibilities of your job?
5. Are there many job opportunities in you occupation?
6. Are there any opportunities of advancement? What are they?
7. Are there opportunities for both men and women in this work?
8. Is your job steady work?
9. What special benefits do you receive?
10. How much could a good worker earn to start as a _____ and later after about 10 years?
11. What do you like best about your job?
12. What do you like least about your job?
13. Pleast describe your working conditions.
14. What school subjects help you most in your job? (Math, English, Writing, Science, Speaking, Reading, etc.)
15. What schooling or training is reqired to do your work?
16. What is the cost of such training, and time involved?
17. How did you get your job?
18. If you had all the money you needed, would you still want to be what you are and continue working at your present work? Why? Why not?

19. What personal satisfaction do you receive from your work?
20. Would you recommend this type of work to others?
21. How does your work help:
    a. Your employer?
    b. Your family?
    c. Your community?
22. How is your family life influenced by your work?
23. How is your community life influenced by your work?
24. Who are some of the other people you work with and what are their job titles?
25. Is it necessary to belong to a union?
26. What are the dues?
27. How has your job changed in the last 20, 30, 40, years?
28. What do you see in the future for employment in your field?
29. How often do you expect to re-train, or go back to school?
30. What effects are modern inventions having on your work?
31. Will your job become obsolete?
32. What responsibility do you have to be honest and to give a full commitment to your work?

Conservation & Agri. Bus. Cluster — Forest Services Area of Study

CONCEPT: The U.S. Forest Service workers have a basic interest in the multiple use management of all renewable surface resources of our national forests.

OBJECTIVE: (1) Define or illustrate what multiple use management of forest lands is, (2) give and example of multiple use in some of the national forests of Utah, (3) tell or illustrate why multiple use of forest lands is good, and (4) identify or illustrate at least three things foresters would do to bring about multiple use management of our forest lands.

WHAT I NEED	WHAT I DO
WOW Worksheet: Multiple Use Management of Forest Lands, 04 01. **Bulletins:** Multiple Use in Action and Multiple Use Management, #PA 770, U.S. Forest Service	1. HAVE individuals or groups find answers to the following questions: a. What is multiple use management of forest lands? b. Why is multiple use management practiced? c. What does it mean to us in our communities now and in the future? d. What would happen to our water supply if our forest resources were not managed properly? 2. The National Forest Service has a symbol called the "Multiple Use Tree." HAVE students draw this symbol and explain its meaning to others.
Film: The Forest, U.S. Forest Service.	3. VIEW and DISCUSS the information in this film. a. Explain or illustrate five uses (multiple use) of our national forests. b. How do these five uses affect or help me? c. What can I do to protect these resources for future use?

WHAT I NEED	WHAT I DO
	d. What do foresters do to support "multiple use management" of our national forests?
Film: Life In The National Forest, Part II, U.S. Forest Service.	4. VIEW and DISCUSS the information in this film. a. Identify the five areas of the "Multiple Use Wheel." b. What are some activities that are directed by the U.S. Forest Ranger in this film?
	5. HAVE students give their opinion, either by telling or illustrating, of why multiple use of forest lands is good. Examples: a. fresh air b. open spaces c. pleasant surroundings d. grazing e. mining f. hunting g. fishing h. camping
	6. COMPLETE the following: a. Define or illustrate what multiple use management of forest lands is. b. Give an example of multiple use in one of the national forests of Utah.

WHAT I NEED	WHAT I DO
	c. Tell or illustrate why "multiple use" is good. d. Identify or illustrate at least three things foresters would do to bring about multiple use management of our forest lands.

Multiple Use Management of Forest Lands

The National Forest symbol, the Multiple Use Tree enclosed by a ring bearing the legend *National Forests -- Lands of Many Uses*, is a hallmark of service to a growing America.

Each of the tree's oval branches stands for a renewable resource of the forest -- water, timber, forage, wildlife, recreation -- and the products and services flowing from them. The trunk represents the Nation and its people who benefit from forest resources.

The line inscribing the tree establishes the interrelation and interdependence of resources and people. Its continuity symbolizes multiple use management by indicating that the resources are developed and managed in planned combinations to provide optimum benefits to the American people.

Why Multiple Use?

The Forest Service of the U.S. Department of Agriculture, in keeping with its traditional objective of serving the greatest good of the greatest number of people in the long run, is dedicated to the principle of multiple use management of the Nation's forest land resources for sustained yields of wood,

water, forage, wildlife, and recreation.

There is a growing need for these and related forest products and services by our dynamic society, characterized as it is by a population explosion, a higher standard of living, and an ever-increasing mobility.

As our knowledge of man and his environment becomes greater, deeper, and more unified, and as we develop more capable automated machines for sorting and storing this knowledge for easy reference, the multiple use principles so universal in natural processes are being applied more effectively to produce increasing quantities of the commodities and amenities demanded by a growing society on the move.

With professional multiple use planning and its skillful execution on the ground, we can have more high-quality air, water, timber, wildlife and fish, forage, open space, scenic beauty, and outdoor recreation from our forest lands -- now and in the future.

What Is Multiple Use?

As stated in the Multiple Use-Sustained Yield Act of 1960, multiple use means "the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people: making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that

Multiple Use Management of Forest Lands

some land will be used for less than all of the resources: and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output."

The act defines sustained yield as the "achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land." The act also states that the establishment and maintenance of areas of wilderness are consistent with the purpose of the act.

Multiple use management of forest land resources -- wood, water, forage, wildlife, and recreation -- is extremely complex. These resources are interdependent to a great extent, and often interact. What happens to one resource can have specific, predictable effects on others, harmful or beneficial. Good forest land management not only ensures a supply of clear water for industrial and domestic use, but also may enhance forest recreational opportunities such as swimming and fishing. Both tree planting and tree harvesting can be done in such a manner as to improve habitat for wildlife.

Mutliple use management is applied on-the-ground to specific areas of land. Renewable forest land resources always occur *in combination*, although the amount, type, and quality of the

Multiple Use Management of Forest Lands

resources may vary from area to area. The needs of people also may vary from area to area.

In determining the most desirable combination of uses on a particular area of land at a particular time, not only the character of the land and the development potential of its resources but also local, regional, and national needs must be considered. As needs change, the combination of uses may be varied to provide more or less wood, water, wildlife, forage, or recreation. Effective multiple use management requires that planning be a continuing process rather than a one-time static solution.

This information comes from the U.S. Forest Service bulletin, Multiple Use Management.

05 Lex. 01 W.S.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: Multiple use management of forest lands is important for continuous yields of forage.

OBJECTIVE: Students will be able to tell or illustrate why forest rangers must protect and manage grasslands.

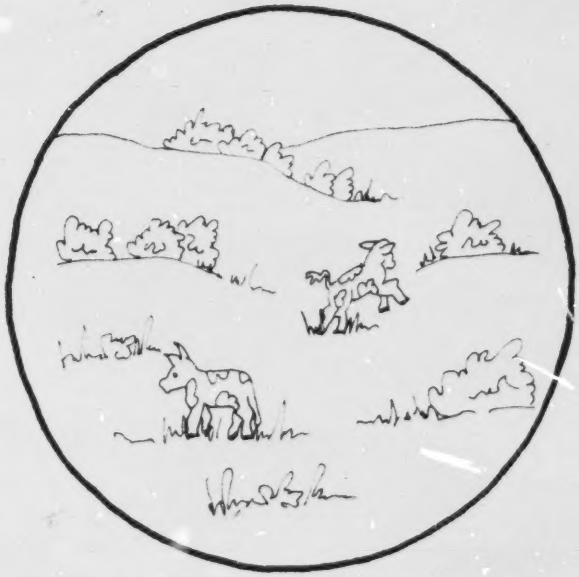
WHAT I NEED	WHAT I DO
Bulletin: In Your Service, U.S. Forest Service. WOW Worksheet: Forage, 05 01. Encyclopedias, textbooks, etc.	1. VIEW and STUDY the information in this bulletin or in the WOW Worksheet. a. What are the four kinds of grassland ranges? b. Of what importance are the ranges to the following? (1) Cattlemen (2) Sportsmen (3) The people in the communities below the forage areas.
Film: Life In A National Forest: Grazing In The Forest, U.S. Forest Service, Utah State Library Commission Film Library 2150 So. Second West Suite 16 Salt Lake City, Utah 84115	2. VIEW and DISCUSS the information in this film which covers topics such as: the forest ranger, forage management, forage, and cattle grazing. a. What are some things that concern the forest ranger as he plans for and allows grazing by cattle? b. What is a good forage condition for cattle? c. Why must forest rangers protect and manage national forest grasslands?

WOW Worksheet:

05 Lex. 01 W.S.

FORAGE

MOUNTAIN MEADOW



OPEN RANGE

WOODLAND RANGE

OPEN-FOREST RANGE

Forage

A big part of National Forest use, particularly in the West, is the grazing of sheep and cattle. The range areas vary considerably in location, in kinds and quality of forage, and in the way they must be managed for greatest, continual production. They must see that there will be sufficient forage, year after year, for the livestock of the thousands of families who depend on the ranges for their living and for the big game which also use the range. They must make sure that enough grass and other forage plants are left over to protect the land against erosion and floods.

Through inventories or surveys, your Forest Rangers assemble information on soil, forage production, water developments and other needed improvements, the relation of range use to other uses, and the best season of use. These aid in working up management plans and putting them into practice. Local ranchers and farmers graze their livestock on National Forest range under permit. They pay a fee for the livestock they graze and are allotted special grazing areas. The animals are counted as they are put on the range because the number of livestock and the length of time they may graze are carefully controlled. The Forest Rangers ride the range with the stock men. Working together, they can keep the land in good condition, not overgrazed, and yet not undergrazed, so that both the land and the stockmen get a fair deal. The management plans are a guide to proper management. As in the case

Forage

of any of the forest resources, the best results in their application are achieved when the forest manager and forest user work together to protect, manage, and improve that particular resource.

This information comes from the U.S. Forest Service bulletin, In Your Service, pp. 10-11.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: Multiple use management of forest lands is important for continuous recreational activities.

OBJECTIVE: Students will, (1) identify recreational activities that are available to them because of our national forests, (2) tell what woodland manners are, and (3) name or do three things to protect our forests for recreational activities.

WHAT I NEED	WHAT I DO
Film: Woodland Manners, U.S. Forest Service, Utah State Library Commission Film Library, 2150 So. Second West Suite 16 Salt Lake City, Utah 84115	1. VIEW and DISCUSS the information in the movie, Woodland Manners, and have students TELL or ILLUSTRATE what necessary measures must be observed by the public to keep the forests clean and alive.
Film: Discover the Different World of Utah, U.S. Forest Service.	2. VIEW and DISCUSS the scenery and information in this film which shows and describes some of our beautiful cities, recreational centers, important resources, and other tourist attractions. a. Why and how are these resources important to us and visitors who come to our state? b. What do we need to do to protect these beautiful areas of our state so they have future recreatioal value?
Film: Life In A National Forest: Fun In The Forest, U.S. Forest Service.	3. VIEW and DISCUSS the information in this film which covers topics such as: swimming, fishing, picnicking, and cleanliness. a. Why and how does the forest ranger concern himself with recreational facilities?

WHAT I NEED	WHAT I DO
	b. What are some types of recreation that can be enjoyed in a national forest? 4. HAVE students COMPLETE the following: a. Identify recreational activities that are available to them because of our national forests. b. Tell what woodland manners are. c. Name or do three things to protect our forests for recreational activities.

07 / Lex. 01 / W.S.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: Multiple use management of forest lands is important for continuous yields of wood (timber).

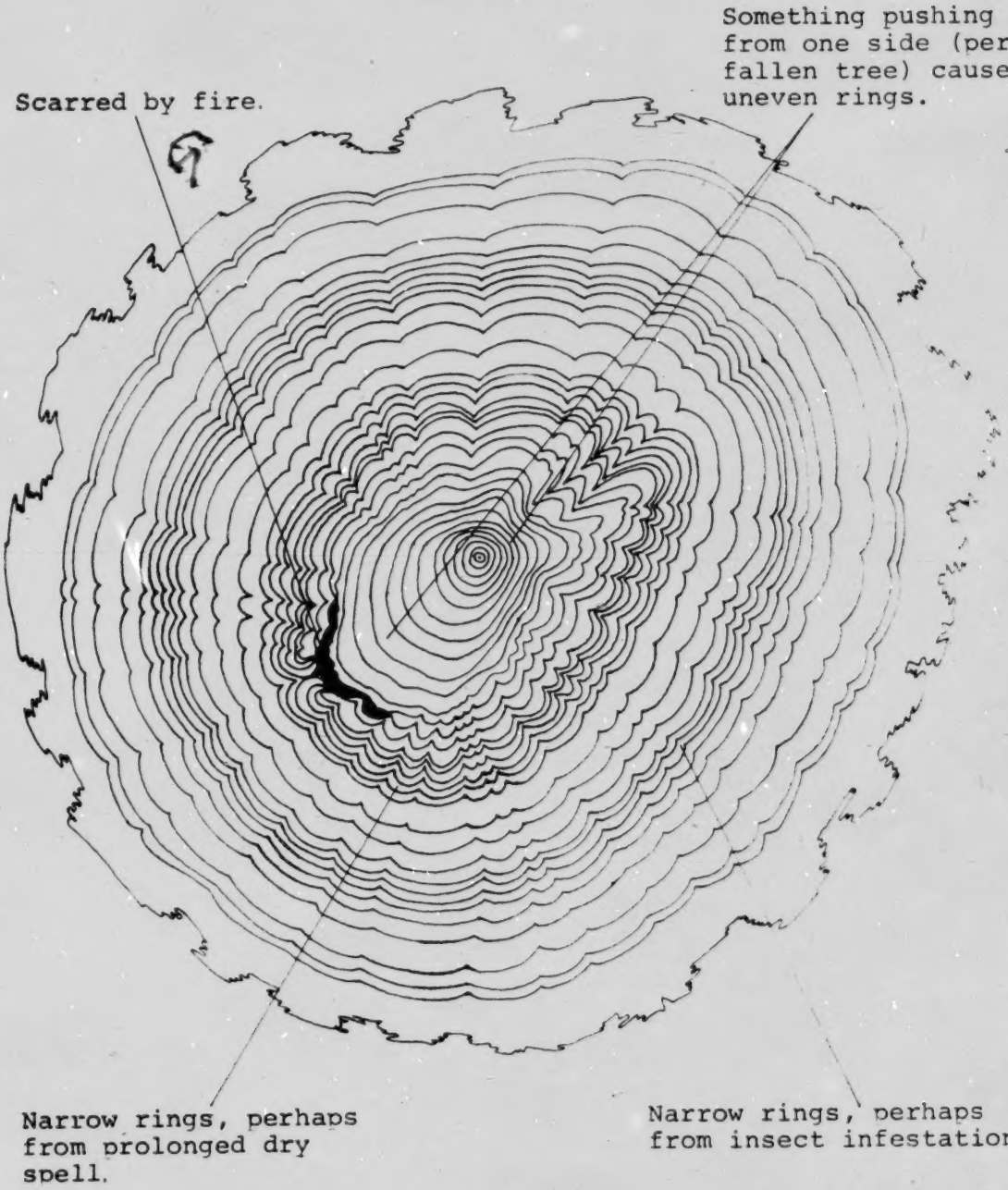
OBJECTIVE: Students will be able to tell or illustrate five benefits derived from timber.

WHAT I NEED	WHAT I DO
Bulletin: In Your Service, PA 545, U.S. Forest Service Federal Building 125 So. State St. Salt Lake City, Utah 84111	1. GUIDE students in a discussion of how forest rangers know where and how much timber will be cut.
World Book Encyclopedia, Vol. #7, pp. 340-341. Chart: What We Get From Trees, U.S. Forest Service.	2. With students, make a list of products we use that come from trees. Then have students do some research on this. (Pictures from magazines of various products would be most effective, use them in a bulletin board.)
Bulletin: Forestry Activities, PA 457, U.S. Forest Service. Section of a tree, 3" - 5" in diameter, 12" long.	3. There is an interesting activity on page 6 of the bulletin, Forestry Activities. This shows what a tree looks like from the inside out.
WOW Worksheet: Section Of A Tree, 07 01. Encyclopedias and textbooks	4. HAVE students LOCATE and IDENTIFY the pith, heartwood, spring growth, cambium layer, xylem, phloem, bark, and the annual rings. Answer question: What function or purpose do the different parts of a tree serve?

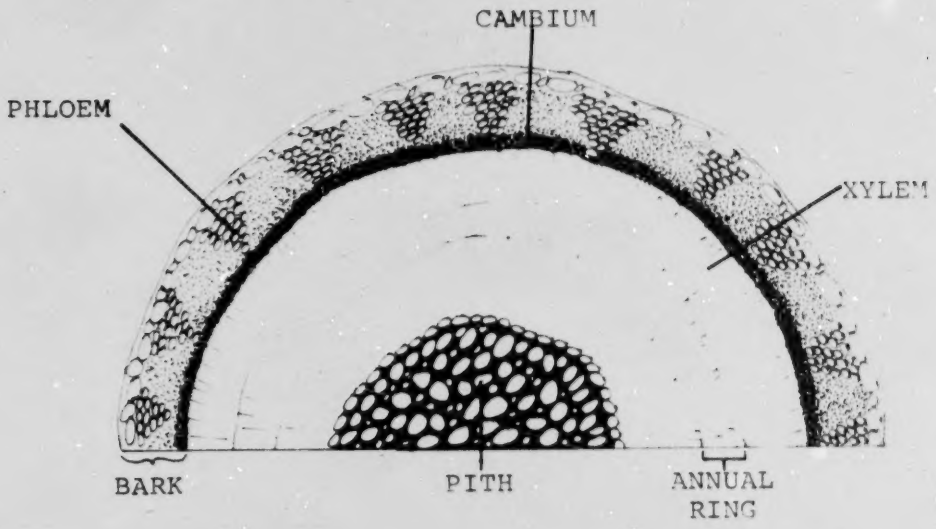
WHAT I NEED	WHAT I DO
Films: A Fire Called Jeremiah and The Voice Of The Forest, U.S. Forest Service, Utah State Library Commission Film Library 2150 So. Second West #16 Salt Lake City, Utah 84115	5. SHOW movies on forest fires and talk about the importance of fire safety in our national forests. Posters could be made by each student illustrating proper methods of using and putting out fires.
Film: The Eternal Forest, U.S. Forest Service.	6. VIEW and DISCUSS this film. a. What was the condition of the forests when early settlers came to this country? b. What happened to our forests? c. What have foresters and others done to protect and rebuild our forests? d. Explain why forestry is today considered a science. e. What are some uses of lumber?
Film: Guilty, U.S. Forest Service.	7. VIEW and DISCUSS the film which portrays fires caused by human carelessness. a. In the criminal case, the state against an individual, what evidence is gathered by foresters and others to convict the defendant? b. In the civil case, one person taking suit against another, why does the plaintiff bring suit against his neighbor? c. In the juvenile case involving a young person, how is the young person brought to understand the effects of his carelessness?

WHAT I NEED	WHAT I DO
	d. What do the foresters do in each case? e. Discuss the importance of foresters, law officers, and courts in helping us to understand the importance of our natural resources.
Film: Life In A National Forest: The Forest Gives Us Wood, U.S. Forest Service.	8. VIEW and DISCUSS the information in this film which portarys timber, timber harvesting, timber usage, reforesting, etc. a. What is hardwood? Softwood? b. What are some things done by a forest ranger to manage forest wood resources properly? c. What is block cutting? Select cutting? d. Is it best to plant new seedlings or let nature do it over a period of time? 9. HAVE students tell or illustrate five benefits derived from timber.

Section Of A Tree


Something pushing tree from one side (perhaps fallen tree) causes uneven rings.
Scarred by fire.
Narrow rings, perhaps from prolonged dry spell.
Narrow rings, perhaps from insect infestation.

Section Of A Tree



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08 / Lex. 00 / W.S.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: Multiple use management of forest lands is important for a continuous supply of water.

OBJECTIVE: Students will learn why water flowing from a forest is its most valuable resource.

WHAT I NEED	WHAT I DO
	1. HAVE students discuss the importance of water in the home, on the farm, and in industry. a. What would happen if the water supply were cut off? b. What would happen if the water to your home and other places was to become polluted (dirty, contaminated by disease germs, harmful chemicals, etc.)?
Bulletin: Forestry Activities, U.S. Forest Service.	2. VIEW and DISCUSS one of the following films. a. What happens when man destroys the ground cover on our watersheds? b. What has man done to protect or rebuild the surface area after trees, grasses, etc. have been destroyed by fire, overgrazing, insect infestations, etc.
Film: Life In A National Forest: Forest Guards Our Water, U.S. Forest Service.	3. VIEW and DISCUSS the information in this film which tells about water resources in a national forest and its management by a forest ranger. a. What are some plants that make a good protection and cover for soil? b. What happens in times of heavy water runoff when grazing is heavy or

WHAT I NEED	WHAT I DO
	plants and trees have been destroyed by fire? c. What are some uses of mountain water?
Encyclopedias, Science texts.	4. HAVE students study to find out conditions necessary for good watersheds.
	5. DISCUSS with students how watersheds work, and some benefits we get from them.
Bulletin: Forestry Activities, U.S. Forest Service.	6. Students can learn more about a watershed by making one. Full details are found on page 11 of the bulletin, Forestry Activities.

09 Lex. 00 W.S.

Conservation & Agri. Bus. Cluster — Forest Services Area of Study

CONCEPT: Multiple use management of forest lands is important for continuous yields of wildlife.

OBJECTIVE: Identify or illustrate one animal or bird which makes its home in a national forest, (2) tell or illustrate the importance of wildlife to us, and (3) tell or illustrate things the foresters and others do to protect our wildlife.

WHAT I NEED	WHAT I DO
Films: Patterns Of The Wild and Wildlife And The Human Touch, U.S. Forest Service.	1. HAVE students VIEW and DISCUSS the scenes and information in one or both of these films. a. What happens to wildlife when forest lands are abused? b. What are forest rangers doing to make the national forests more livable? c. What does wildlife do or give to man? (food, recreation, beauty)
Textbooks, encyclopedias, library books, etc.	2. HAVE students choose one animal which lives in our national forests and make up a report telling about this animal. Include information and pictures about the animal, its habits, habitat, and its contribution or danger to the national forest.
Film: Life In A National Forest: Forest Is Home To Wildlife, U.S. Forest Service.	3. VIEW and DISCUSS the information in this film that tells about wildlife resources in a national forest and its management by a forest ranger. a. What are the five points of the multiple use wheel? b. Who is responsible for the proper management of wildlife resources? c. Why must a forester be concerned with a proper balance between wildlife and available food?

10 / Lex. 02 / W.S.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: There are several stages in the development of a climax forest.

OBJECTIVE: Identify or illustrate the stages in the development of a climax forest.

WHAT I NEED	WHAT I DO
WOW Worksheet: Succession of a Mature Pine Forest After a Natural Disaster, 10 01. WOW Worksheet: Succession of a Beech-Maple Forest, 10 02. Research encyclopedias and textbooks for further information. S.V.E. Study Prints: Nature's Communities: A Forest Develops.	1. MAKE transparencies of these WOW Worksheets, then SHOW and DISCUSS them in class. a. What are the basic steps in the development of a muture pine forest after a natural disaster? b. What are the basic steps in the development of a mature beech-maple forest? c. What conditions determine what the climax forest will be like? Consider: (1) Climate (2) Altitude (3) Note: Be sure students understand that the trees and vegetation in a climax forest varies.
Sound filmstrips: From Rock To Forest and From Sand Dune To Forest, Centron Educational Films.	2. VIEW and DISCUSS the information in these two sound filmstrips. They show or develop the following concepts: a. The formation of a forest, moving from a sand dune or from simple plants on bare rocks to the final climax forest, follows an interesting pattern(s) depending upon the forces of nature and man's influence.

WHAT I NEED	WHAT I DO
	b. The community of living things, including plants and animals, changes in the different phases of forest succession. 3. HAVE students identify or illustrate the stages in the development of any one climax forest.

WOW Worksheet: 10 Lex. 01 W.S.

Succession Of A Mature Pine Forest
After A Natural Disaster

1. MATURE PINE FOREST

This might be a typical pine forest such as is found in the Wasatch Mountains of Utah.

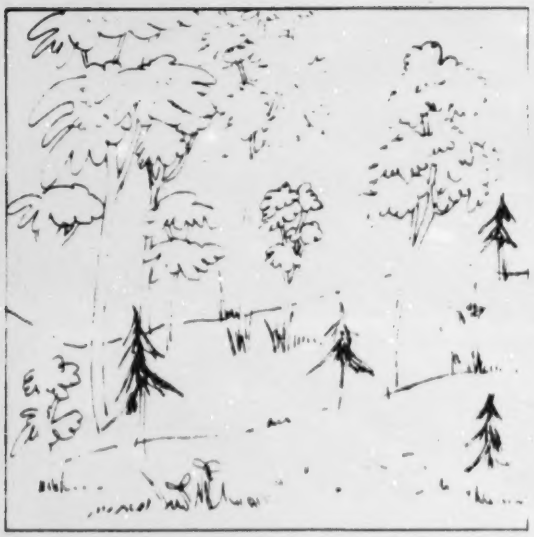
2. FIRE

Fire is a natural disaster that may destroy the present mature pine forest.

3. WEEDS, GRASSES, AND SMALL PLANTS

These sprout, take root, and grow rather rapidly where the tall pines once grew. They protect and enrich the soil.

Succession Of A Mature Pine Forest
After A Natural Disaster



4. ASPEN

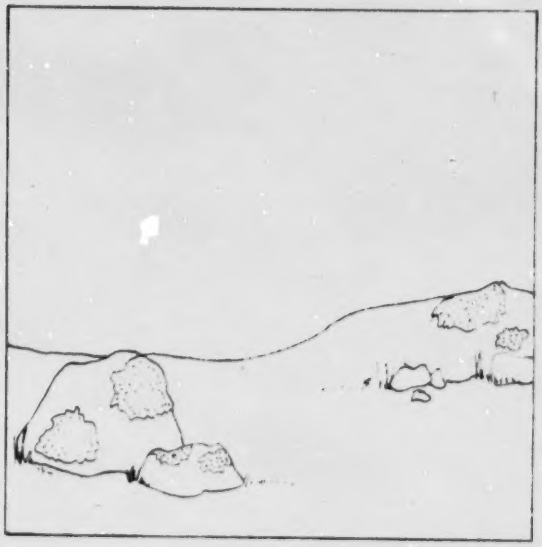
Aspen are a broadleaf tree. As they grow, they shade, crowd out, and replace the plants that they shade. In time, young pines sprout and grow under these, because they are able to grow with a reduced amount of sunlight.

5. MATURE PINE FOREST

Eventually the pine trees take over and crowd out the aspen which cannot survive in reduced sunlight. A mature pine forest is again the final community, because the soil, climate, and other growing conditions are suited best for a pine forest.

Book:
Science For Tomorrow's World, Barnard, J. Darrel, Macmillan Co., New York, 1966, pp. 248-251.

Succession Of A Beech-Maple Forest



1. LICHEN ON ROCK

   These are very small and hardy plants that grow on rocks. They produce acids which cause rocks to break up into small particles. Lichen die, decompose, and enrich the soil.

2. MOSSES, GRASSES, FERNS, AND SHRUBS

   These are more complex plants that follow lichen. They also grow, decay, and enrich the soil.

3. OAKS AND PINES

   These are large trees which grow, crowd out other plants, and enrich the soil when they die. Young maples and beeches begin to grow beneath them.

Succession Of A Beech-Maple Forest

4. MAPLES AND BEECHES

These trees eventually crowd out the oaks and pines, and form the climax community. They will continue in the area unless upset by a natural disaster such as fire or disease. Climate, soil, and other growing conditions determine what the final community will be like.

Note: Man may upset this growth pattern.

Book:
Biology Living Systems, Oram, Raymond F., Charles E. Merril Publishing Co., Columbus, Ohio, 1972, pp. 656-657.

11 Lex. 01 W.S.

Conservation & Agri. Bus. Cluster — Forest Services Area of Study

CONCEPT: Professional foresters plan and supervise the management of national forest areas.

OBJECTIVE: Explain or illustrate (1) at least three things a person must do to become a professional forester, (2) at least two types of professional jobs in the Forest Service, and (3) at least two main duties or responsibilities of that job.

WHAT I NEED	WHAT I DO
WOW Worksheet: Becoming A Professional Forester, 11 01. Britannica Jr., Vol. #6, pp. 159-165. Compton's, Vol. #9, pp. 340-347. New Book of Knowledge, Vol. #6, pp. 371-377. World Book, Vol. #7, pp. 336-349.	1. HAVE individual students or committees research the listed sources to find information about the professional foresters. a. What are some of the basic skills that he must have? b. What are some of the specific skills that he must have? c. What types of attitudes must a successful forester have concerning the following: (1) use of knowledge, (2) industry and work habits, (3) honesty, (4) reliability, (5) friendliness, (6) decision making, and (7) out-of-doors (nature). 2. HAVE some students send for information concerning foresters: Utah State University College of Natural Resources Logan, Utah 84321

WHAT I NEED	WHAT I DO
Encyclopedias Textbooks Library books	3. The following is a partial list of titles or job classifications for professional foresters. Information about each is not included nor is it easily found in most publications. This list will, however, help you to see that there are many workers in the Forest Service whose jobs are quite different from that of the traditional forester. a. Supervisors b. Managers c. Surveyors d. Highway engineers e. Civil engineers f. Sanitary engineers g. Realty specialists h. Landscape architects i. Wildlife biologists j. Range conservationists k. Hydrologists l. Fire officers m. Electrical personnel n. Soil scientists o. Geologists p. Plant pathologists q. Range ecologists r. Botanists

WHAT I NEED	WHAT I DO
	CHECK with your parents, neighbors, libraries, and other sources to find and share information concerning any of the above workers in the Forest Service or others for whom you may find information.
Films: The Foresters, Centron Educational Films. Conservation And Our Forests, Bailey Film Associates.	4. VIEW and DISCUSS the information in either of these films which show modern equipment being used under the direction of a forester.
Film: Rainbow Valley, U.S. Forest Service Film.	5. VIEW and DISCUSS the information in this film which discusses the work of one professional forest ranger. a. What are his responsibilities? b. What are some of the multiple benefits of timber, water, grass, wildlife, and recreational resources?
Film: Smokejumpers, U.S. Forest Service Film.	6. VIEW and DISCUSS the information in this film that discusses the work of another professional forester. a. What training and precautions must a smokejumper have? b. Would anybody be able to do this type of work? c. Do you think fire fighting is carried on in a more efficient and modern way than that which is shown in this film? Explain. (New equipment, chemicals, communication systems help in fire fighting.)

WHAT I NEED	WHAT I DO
Film: The American Forester, U.S. Forest Service Film.	7. VIEW and DISCUSS the information in this film. This film is an excellent source of information on the modern professional forester. a. What is the prime concern of all foresters? (Management of our national forests to maintain continuous forest production and usage.) b. Who is the key person in the wise usage and preservation of forest resources? (The forester) c. What are some of the fields or job areas that a professional forester may seek. (Laboratory specialist, university professor or administrator, forest engineer, timber management, forest and wildlife management, recreation engineer, public relations work, and industrial forestry.) d. What are the resources that are his concern? (Trees, water, wildlife, grasslands, and soil.) e. Who helps the forester? (Technicians and nonprofessional foresters.)

WOW Worksheet: 11 Lex. 51 W.S.

Becoming A Professional Forester

What *is* essential is a good background knowledge of the arts and sciences involved in forestry: knowledge first in the basic fields of language, communication, and culture that enable a forester to deal on equal terms with other knowledgeable men; and secondly, specialized knowledge in the biological and physical sciences and engineering skills he will use in his work.

In addition to knowledge, the other essentials for success in a career in forestry are the same elements of good character and temperament that make for success in any enterprise -- intelligence, industry, honesty, reliability, ability to get along with other people.

There is *professional forestry work*, and there is *non-professional work*. Anyone who is entitled to be called, correctly, a forester, is a professional. Usually he has a college degree from a school offering professional training in forestry.

Professional foresters plan and supervise the management of forest areas. They may be called upon to organize and direct systems of forest fire control, or the control of insect pests and tree diseases. They may determine the needs and locations for reforestation projects, or administer the sale and harvesting of mature timber. Or they may engage in scientific research to obtain new knowledge needed for the protection and management of forest lands. The training of a professional forester is comparable to that of a civil engineer, or lawyer, or other qualified professional man.

Non-professional forest workers usually work under the general supervision of professional foresters. They may include such

Becoming A Professional Forester

forestry technicians as timber cruisers, fire dispatchers, log scalers, and road survey party chiefs; or forestry aides such as lookouts, fire control assistants, smokejumpers, and recreation guards. Skilled workers in many trades also are needed in forestry work -- mechanics, electricians, welders, bulldozer operators, cooks, and others. Federal, State, and other forestry agencies and forest industries, of course, have need in their offices for clerical workers -- payroll clerks, mail and file clerks, stenographers and typists. And there are jobs for semi-skilled and unskilled laborers, in the woods, in forest industry plants, and in the offices.

Forestry has been defined as the scientific management of forests and forest lands for the continuous production of goods and services. Most jobs in forestry are concerned more or less directly with the management of lands. Some forest lands are managed for a specific purpose.

Our great national forests (there are more than 150 of them, comprising more than 180 million acres, located in some 40 states) are managed for all of the various land uses mentioned above, and for other uses as well. Foresters call this *multiple-use management*, and right here is where your education as a forester starts. Multiple-use management means that within a national forest certain areas may be devoted to recreation, certain areas to timber growing, certain areas to livestock grazing, wildlife habitat, mineral production, preservation of outstanding scenic values, or other uses. Many areas within the forest may be devoted to a combination of several of these uses.

Becoming A Professional Forester

Multiple-use management is practiced on most State forests and on many of the holdings of large industrial companies, as well as on the national forests. Obviously, a multiple-use manager, such as a ranger in charge of a national forest ranger district, or the supervisor in charge of an entire national forest composed of several ranger districts, must have a broad background of knowledge and experience if he is to exercise competent management in all the phases of multiple use. Supervisors and rangers may have specialists on their staffs who handle the detailed work in such fields as fire protection, pest control, timber management, watershed management, range management, wildlife, and recreation. But the supervisor or ranger, or the manager in charge of any multiple-use forest area, has over-all responsibility for planning and directing and coordinating the various activities and development projects on his forest area.

So, to be a professional forester, college training in forestry is practically a "must." A minimum of four years of college work, leading to a bachelor's degree or equivalent, is required. Many young men continue with advanced work for graduate degrees, especially those who wish to go into forestry research or into some specialized phase of forestry or related conservation work.

In high school, prospective forestry students should get as broad a general background as possible, in order to qualify for college work. It is not necessary nor desirable that you specialize in forestry-related subjects here, but you should be sure to take the preparatory work available in chemistry, physics, mathematics, biological sciences, English literature and composition, and

Becoming A Professional Forester

public speaking.

Your first years of college are devoted to broadening your cultural background and acquiring a foundation in scientific, engineering, ecomomic, and social studies. Then, usually starting in your junior year, come technical courses in forestry, such as silviculture, forest management, forest protection, forest economics, and forest utilization.

Those who continue with graduate work choose some special subject to dig into more deeply.

Many of the forestry schools conduct summer-school camps where the students get extra in-the-woods training. Many forestry students also get in-the-woods experience through employment in national or State forests or with lumber companies during the summer vacation periods. The Forest Service and most other forestry agencies, as a matter of general policy, give preference to forestry students over other college students in hiring young men for summer jobs.

Education in forestry need not end when one receives his degree. Practicing foresters now have opportunities for continuing professional education, through conferences, seminars, short courses, and other educational devices designed to help professionals keep abreast of new developments in their particular fields of interest. The colleges and universities, federal and State agencies, professional organizations, and the forest industries often cooperate in arranging and conducting such special conferences or courses. The Forest Service and other agencies also provide opportunities for special on-the-job training for their own employees.

12 / Lex. 01 / W.S.

Conservation & Agri. Bus. — Cluster

Forest Services — Area of Study

CONCEPT: Nonprofessional foresters (technicians, aids, clerks, skilled workers and laborers) provide important services for the U.S. Forest Service and the American citizens.

OBJECTIVE: Explain or illustrate (1) at least one job in each of the categories of nonprofessional workers in the Forest Service and the duties or responsibilities of each, and (2) the importance of their work.

WHAT I NEED	WHAT I DO
WOW Worksheet: Nonprofessional Forest Service Workers, 12 01.	1. FIND answers to the following questions: a. What does the Forest Service do? b. What kind of work can a person who is not a professional forester find in the Forest Service? c. How important are the nonprofessional workers to the Forest Service? What are the main categories of non-professional foresters? d. What kind of experience do I need to qualify for a nonprofessional job in the Forest Service? 2. COMPLETE the following: a. Explain or illustrate at least one job in each of the categories of nonprofessional workers in the Forest Service and the duties or responsibilities of each. b. Explain or illustrate the importance of their work to you, your community, county, and state.

WOW Worksheet: 12 Lex. 01 W.S.

Nonprofessional Forest Service Workers

1. "WHAT DOES THE FOREST SERVICE DO?"

The Forest Service, a part of the U.S. Department of Agriculture, is responsible for the protection and development of about 186 million acres of mountains, forests, waterways, and grazing lands grouped within 154 National Forests and 19 National Grasslands.

The principal objective of the Forest Service is to manage the resources on these Federal lands for "the greatest good of the greatest number in the long run." To accomplish this, the National Forests must be made to yield continuous supplies of water, timber, forage, and wildlife, as well as to provide recreation opportunities for the millions of people who visit them.

In the course of their work, foresters encounter many problems that make their goals difficult to reach -- such problems as tree disease, insect infestations, and fire, to name a few. The Forest Service employs well-trained scientists and technologists in its numerous research units to find solutions to these problems as well as to test new and better ways of using our valuable resources. To assist its scientists and administrators, nonprofessional workers are also employed.

In addition to the 97 million acres of commercial forest land in the National Forests, there are 386 million acres of forest land owned privately or by the States. These non-Federal holdings make up nearly 80 percent of our total commercial timber growing area. Adequate future timber supplies in the United States depend, to a large extent, on increasing the productive

capacity of these lands. The use of better forestry practices is the key to this objective. The Forest Service, in cooperation with many States, conducts programs aimed at assisting the private landowner in improving his forest lands.

The work of the Forest Service can be better understood if we remember that the growth of our population and economy, and the advances of technology, have created huge demands for natural resources. These demands must be met in the crucial years ahead. The Forest Service does its part by constantly seeking and practicing good principles of forest conservation, and by cooperating with all forest owners for their and the Nation's benefit.

2. "I AM NOT A PROFESSIONAL FORESTER. WHAT KIND OF WORK CAN I FIND IN THE FOREST SERVICE?"

The Forest Service needs a competent staff of technicians, aids, skilled workers, and clerical personnel to assist management in all phases of its work.

Since many National Forests are in mountainous country which becomes snow-covered and inaccessible in the winter, much of the nonprofessional type work must be done during the other three seasons. Tree planting work is usually done in the spring or fall. Fire control work is largely confined to the "fire season," the period of greatest fire danger. In the Western States, this is during the summer, and the Eastern States, early spring and late fall.

During the summer months, the nonprofessional staff also works on flood control, disease and insect control, brush disposal,

timber stand improvement, and construction and maintenace of roads, trails, campgrounds, sanitation facilities, and other buildings.

3. "HOW IMPORTANT ARE THE NONPROFESSIONAL WORKERS TO THE FOREST SERVICE?"

Very important, indeed. Nonprofessionals help the professional do the job he has to do. An engineer's road design for a National Forest is useless unless he has a corps of unskilled, skilled, and supervisory workers to build the road. In this respect, the Forest Service is like any other large organization with its different levels of skills and functions which have to operate harmoniously.

Let's look a bit closer at the categories listed under the second question:

A. TEHCNICIAN. -- More and more professions are finding that certain tasks that were once performed by the professional can be delegated to the technician. In the Forest Service, this approach has met with great success. Technicians have taken over from the professional foresters such responsible and difficult jobs as supervising on-the-ground operations in timber sales, recreation-area use, or research activities that require the use of practical skills and experience; collecting, consolidating, sometimes analyzing, reporting, and summarizing data within guides set up by professionals; contacting the public, contractors, and other forest users for information or policy enforcement; or supervising a road survey crew on a road-

building project that will make timber accessible for harvesting.

B. AID. -- No organization can exist without people who know how to get the basic or preliminary work done. The Forest Service is no exception. It has always been fortunate in having hard-working aids who not only get the job done, but enjoy doing it.

Aids, even more than technicians, work at a variety of productive tasks that help both the technician and the professional. Some of these tasks are: Scaling logs; marking specific trees and collecting and recording such data as tree heights, tree diameters, and tree mortality; installing, maintaining, and collecting records from rain gages, streamflow recorders, and soil moisture measuring instruments on simple watershed improvement projects; serving on a road survey crew as rodman, rear or head chainman, notekeeper, or level instrument man.

C. CLERICAL. -- Another important group of support personnel in the Forest Service is the clerical and related force. Clerical workers are found at all organization levels, including the forest rangers' office. A unit may require the services of one or more of the following: Clerk-typist, voucher examiner, stenographer, mail and file clerk, and dictating-machine transcriber. Many women are employed in these positions.

Nonprofessional Forest Service Workers

D. SKILLED WORKER. -- For construction, maintenance, and fire control projects, the Forest Service requires such skilled workers as carpenters, parachute repairers and packers, welders, cooks, bulldozer operators, and others experienced in specific trades and crafts.

E. LABORER. -- In addition to skilled workers on the numerous National Forest projects, laborers are also needed. Unskilled workers destroy undesirable trees, using poison or other methods; prune trees to improve their quality; build fire-lines; eradicate bushes that transmit the destructive white pine disease known as blister rust; plant seedlings; dig ditches; load and unload equipment and tools; and perform other supervised duties.

4. "WHAT KIND OF EXPERIENCE DO I NEED TO QUALIFY FOR A NON-PROFESSIONAL JOB IN THE FOREST SERVICE?"

A. TECHNICIAN. -- Technicians usually begin working at the GS-5 grade level. Jobtitles include fire control technician, fire prevention technician, range technician, forestry technician, engineering and survey technician. Candidates for technician positions must have a minimum of 2 years of general experience and 1 year of specialized experienced -- a total of 3 years.

An example of acceptable general experience for the position of fire control technician would be experience gained in any field of forestry, or related field, that shows the applicant has acquired, and can use, the basic knowledges and skills needed for fire

control work.

Specialized experience for the position of fire control technician would be that which demonstrates the possession of knowledges and skills basic to fire dispatching, fire prevention, or some combination of both, depending upon the type of position open.

Substituting high school or other education for parts of the general or specialized experience requirements is permitted. The exact amount of substitution allowed is determined by the nature and length of the subjects studied.

B. AID. -- GS-2 or GS-3 are the beginning grades for fire control aids, fire prevention aids, range aids, forestry aids, engineering aids, and surveying aids. Candidates for aid positions must have at least 1/2 year of general experience for the GS-2 grade, and 1 year of general experience for the GS-3 grade. In some cases, high school graduation may be substituted for the 1/2 year of general experience.

C. CLERK. -- For Grade GS-2, 6 months of general office experience or graduation from high school is required. For grade GS-3, 1 year of general office experience or 1 academic year of business or secretarial school, junior college, or college which is in addition to graduation from high school, is required. Applicants must pass tests covering verbal abilities and aptitude for clerical tasks.

D. SKILLED TRADE AND CRAFT WORKERS. -- Generally, 6 months

of experience assisting a journeyman worker is required for eligibility to the helper or apprentice positions, Level 5 (not to be confused with GS-5). Usually, each month of day class attendance in a trade school may be substituted for each month of required experience.

E. LABORER. -- No previous experience or education is required to start as a Laborer, Level 1. However, to perform the various manual tasks, it is necessary to be in good physical condition.

MATERIALS LIST
Films And Filmstrips

PRODUCER OR DISTRIBUTOR	TITLE
U.S. Forest Service Films Utah State Library Com. Film Library 2150 So. 2nd W. #16 Salt Lake City, Utah 84115	(In order of appearance in unit) Our Magic Land Wildlife and the Human Touch The Forest Life In The National Forest: Part II Life In A National Forest: Grazing In The Forest Woodland Manners Discover The Different World Of Utah Life In A National Forest: Fun In The Forest A Fire Called Jeremiah *The Eternal Forest Guilty Life In A National Forest: The Forest Gives Us Wood Watershed Water For The West Lifeblood Of The Land Life In A National Forest: Forest Guards Our Water Supply Patterns Of The Wild Wildlife And The Human Touch Life In A National Forest: Forest Is Home To Wildlife *The American Forester Smokejumpers Rainbow Valley

MATERIALS LIST
Films And Filmstrips

PRODUCER OR DISTRIBUTOR	TITLE
Centron Ed. Films 1621 West Ninth St. Lawrence, Kansas 66044	*Foresters, 1972
Bailey Film Associates 5995 South Clarkson Littleton, Colorado 303- 798-7352	*Conservation And Our Forests
Sound Filmstrips:	
Centron Ed. Films 1621 West Ninth St. Lawtence, Kansas 66044	From Rock To Forest From Sand Dune To Forest

Note: The starred films are recent and of highest priority.

MATERIALS LIST
Miscellaneous

SOURCE	ITEM
U.S. Forest Service Federal Bldg. 125 So. State Salt Lake City, Utah 84111 524-5030	Map: National Forests Of The Intermountain Region Chart: What We Get From Trees Bulletins: Forestry Activities Multiple Use In Action Multiple Use Management